

## CLAIMS

5           1.       A network processing device, comprising:  
  
              packet processing circuitry adapted to receive an address request from any one of  
multiple processors in the network processing device, the packet processing circuitry adapted  
to output the address request to a network and to receive an address reply to the address  
request; and

10           the packet processing circuitry adapted to multicast the address reply to multiple ones  
of the processors at the same time.

2.       A network processing device according to claim 1 wherein one or more of the  
multiple processors provide address resolution management that matches IP addresses with  
15       Media Access Control (MAC) addresses.

3.       A network processing device according to claim 1 wherein the packet  
processing circuitry is located in a line card and the multiple CPUs are located in one or more  
control cards.

20           4.       A network processing device according to claim 1 wherein the address request  
comprises an Address Resolution Protocol (ARP) request and the address reply comprises an  
Address Resolution Protocol (ARP) reply.

25           5.       A network processing device according to claim 1 including address tables  
associated with each of the multiple processors, the processors in parallel each adding an IP

5 address and associated Media Access Control address to the associated address tables  
received in the multicast address reply.

6. A network processing device according to claim 1 wherein the packet  
processing circuitry converts the address reply from one or more unicast packets to one or  
10 more multicast packets and sends the multicast packets to each of the processors at the same  
time.

7. A network processing device according to claim 1 including a switch fabric  
coupled between the packet processing circuitry and the processors, the switch fabric  
15 including separate egress ports for separately sending the same address reply to each one of  
the processors.

8. A method for updating addresses, comprising:  
sending the packet out with the first address to another network device;  
20 receiving an address request from one or more of the applications or processors for a  
second address associated with the first address;  
sending the address request over a network;  
receiving an address reply from the network identifying the second address associated  
with the first address; and  
25 broadcasting the address reply to multiple ones of the applications or processors at the  
same time.

5           9.       A method according to claim 8 including using an Address Resolution  
Protocol (ARP) to send the address request and receive the address reply.

10           10.       A method according to claim 9 including broadcasting the ARP reply to the  
multiple applications or processors by designating the ARP reply packets as multicast  
packets.

15           11.       A method according to claim 8 including individually updating address tables  
associated with each one of the applications or processors with the second address from the  
second address from the address reply.

20           12.       A method according to claim 8 wherein the first address is an Internet Protocol  
address and the second address is a Media Access Control (MAC) address.

25           13.       A method according to claim 8 including broadcasting the address reply from  
a line card in a network processing device to the multiple applications or processors in one or  
more control cards in the same network processing device

            14.       A method according to claim 8 including receiving the packet with the first  
address from an IP network and sending the address request to endpoints in an Ethernet  
network.

            15.       A network processing device, comprising:  
multiple processors for controlling operations in the network processing device; and

packet processing circuitry adapted to detect unicast control packets from a network and convert the unicast control packets into a multicast control packets that are relayed in parallel to the multiple processors at the same time.

16. A network processing device according to claim 15 wherein the control packets comprise address resolution protocol packets.

17. A network processing device according to claim 16 including multiple network interfaces each coupled to different ports and adapted to detect replies to address resolution request s and broadcast the detected relies to the multiple processors.

18. A network processing device according to claim 16 including address tables associated with each one of the multiple processors, the processors updating the associated address tables with an address contained in the address resolution protocol packets reply multicast from the packet processing circuitry.

19. A network processing device according to claim 15 including a switch fabric having individual egress ports coupled to each one of the multiple processors, each one of the egress ports sending control packets from the packet processing circuitry in parallel to the multiple processors at the same time.